



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/559,616

06/07/2006

Jorg Lehmann

203-061

5583

47988

7590

10/06/2009

WALTER OTTESEN

PO BOX 4026

GAITHERSBURG, MD 20885-4026

EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

10/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/559,616 | <b>Applicant(s)</b><br>LEHMANN ET AL. |  |
|                              | <b>Examiner</b><br>Steven D. Maki    | <b>Art Unit</b><br>1791               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>120205</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

Art Unit: 1791

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2) **Claims 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 517 (JP 9-136517) in view of Japan 741 (JP 2001-308741), Koch et al (US 5,500,065) and Balzer et al (US 6,217,683).**

Japan 517 discloses a transponder 1 comprising a transponder body 1A. The transponder body comprises a chip and an antenna (electronic circuitry and an aerial wire printed on a ceramic substrate). The transponder 1A is attached to an elastic member 1C, which is illustrated as being a strip in Figure 8. The opposite ends of the elastic strip 1C are bonded to the internal tire surface 31 (Figure 10). The middle of the elastic strip is not bonded to the internal surface of the tire so that even if the tire internal surface deforms, the deformation force is not directly applied to the transponder body 1A. See Figure 10 and paragraph 86 of machine translation. Japan 517, directed to tire monitoring, does not specifically recite the transponder as comprising a transponder chip and antenna embedded in a substrate. However, it would have been obvious to use a transponder chip and antenna embedded in a substrate as Japan 517's transponder 1 since (1) Japan 741, directed to making a transponder for a tire, suggests embedding a chip 2 and antenna 1 in "substrate material" (e.g. silicon resin or polyethylene) and (2) Koch et al, also directed to tire monitoring, suggests encasing / encapsulating a monitoring device (transponder) comprising a microchip and antenna in

Art Unit: 1791

material to inhibit straining of the device. Hence, the applied prior art to Japan 517, Japan 741 and Koch et al fairly teach a "transponder arrangement for mounting on an inner wall surface of a tire, the transponder arrangement comprising: a substrate; a transponder including a transponder chip and a transponder antenna embedded in said substrate; a strip of material fixedly connected to said inner wall surface over only a portion of said strip; and said substrate being ... connected to said strip" (emphasis added). With respect to only a portion of the strip 1C being fixedly connected to the inner wall surface, attention is directed to Figure 10 of Japan 517. Japan 517 does not recite "releasably" connecting the transponder body 1A (substrate) to the strip 1C.

As to claims 13 and 23, it would have been obvious to one of ordinary skill in the art to "releasably" connect Japan 517's transponder 1A to the elastic strip 1C since Balzer et al, also directed to tire monitoring, suggests forming a "releasable" connection between a rubber ply 30 and a monitor module E so that the monitor module may be removed to be inspected, repaired and/or updated in hardware and/or stored data, as well as relocated to another tire or replaced by another module (Figure 1, col. 3 lines 1-5, col. 6 lines 45-45-67). The rubber ply 30 in Balzer et al directly corresponds to the elastic strip 1C in Japan 517. The monitor module E in Balzer et al directly corresponds to the transponder body 1A in Japan 517. In the specific example embodiment of Figure 1, Balzer et al obtains the "releasable" connection by providing the rubber ply 30 with a fastener part 20, providing an opening 22 in the monitor module and inserting the fastener part 20 through the opening 22 in the monitor module. In another example embodiment, a strap comprising a hook and loop fastening system extends through an

Art Unit: 1791

opening in rubber ply 330 (i.e. through the middle of a folded rubber ply 330). This strap is then wrapped around the monitor module E and secured to itself via the hook and loop fastening system so as to releasably connect the monitor module to the rubber ply 330. The predicted and expected result of the above combination of applied prior art is (1) preventing direct transmission of deformation force from the tire to the transponder to prevent damage thereto (Japan 517) and (2) allowing a module to be removed for inspection, repair or updating (Balzer et al).

As to claims 14 and 24, Balzer et al suggests forming an opening in the monitor module (substrate) and connecting the monitor module to the rubber ply (strip) via the opening. For example, see Figure 1, 4A, 5A or 10B.

As to claim 15, note the edge 27 ("fixing means projecting therefrom") provided on the monitor module E in Figure 10B.

As to claim 16, note the "opening" between the indexing or ratchet elements 56 of the shaft of the fastener 50 which is part of the rubber ply (strip).

As to claim 17, it would have been obvious to provide the substrate opening with a "rectangular shape and rounded or beveled edges" in view of the various opening configurations disclosed by Balzer et al. For example, note opening 24 in Figure 2 and opening 124 in Figure 5A.

As to claim 18, Japan 517 teaches an elastic strip 1C and Balzer et al teaches a rubber ply.

Art Unit: 1791

As to claim 19, both Japan 517 and Balzer et al teach the "substrate" lying exclusively on the "strip". See for example Figure 10 of Japan 517 and Figure 1 of Balzer et al.

As to claim 20, it would have been obvious to one of ordinary skill in the art to provide the substrate with a "rounded form on the side facing toward the inner side of the tire" in view of the various "substrate" configurations disclosed by the applied prior art. See for example, the rounded corners of the substrate in Figure 6 of Koch et al or the concave surface shown in Figure 14 of Koch et al.

As to claims 21 and 22, it would have been obvious to one of ordinary skill in the art to apply the strip to the inner side of the tire in advance of vulcanization (claim 21) or apply the strip to the inner side of the complete tire after tire vulcanization via cold vulcanization (claim 22) in view of Balzer et al's disclosure to affix the rubber ply to the interior surface of the tire before curing, during curing or after curing of the tire (for example using a chemical cure instead of heat and pressure). See col. 4 lines 39-51 and col. 7 lines 38-67 of Balzer et al.

#### Remarks

- 3) The remaining references are of interest.
- 4) No claim is allowed.
- 5) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

Art Unit: 1791

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/  
Primary Examiner, Art Unit 1791

Steven D. Maki  
October 1, 2009